

Stereo-photogrammetrically derived topography of asteroid (4) Vesta

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After about one year in orbit of (4) Vesta, the Dawn Framing Camera (Dawn FC) acquired several thousand images. Starting from a Survey orbit [1] in August 2011, the surface was imaged stereoscopically with image scales of about 250 m/pxl. We have used these clear filter stereo images to derive a digital terrain model (DTM) of the illuminated surface of Vesta [2, 3]. End of September 2011, Dawn started its primary stereo image campaign [4] from a high resolution mapping orbit (HAMO) and completed the campaign after an extended stay in July 2012. During HAMO, the Dawn FC acquired about 5000 clear filter images with an image scale of about 65 m/pxl of at least 95% of Vesta's surface. We present the recent DTM results of the Dawn-FC stereo-processing as well as improved geodetic parameters of Vesta.

[1] Russell et al. 2012, Science 336, 684-686; [2] Jaumann et al. 2012, Science 336, 687-690; [3] Preusker et al., 2011, AGU, #UB23-02; [4] Preusker et al., 2012, LPSC, #2012